



What Public Water Supply Manager/Operators Need to Know About Consumer Confidence Reports

Kansas Department of Health and Environment
Public Water Supply Section, Bureau of Water

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Notice

This document provides guidance to water suppliers on EPA’s current interpretation of the Consumer Confidence Report Rule. The guidance is designed to implement national policy on these issues. The document does not, however, substitute for EPA or KDHE regulations; nor is it a regulation itself. Thus, it cannot impose legally-binding requirements on EPA, the state of Kansas, or water suppliers, and may not apply to a particular situation based upon its circumstances. EPA and Kansas decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. This guidance may change in the future.

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Introduction

This document is for water suppliers who are preparing the new drinking water Consumer Confidence Reports [40 CFR part 141 Subpart O]. This guide explains all of the requirements for report content, format, and distribution that the U.S. EPA established in the Consumer Confidence Report Rule, published in the FEDERAL REGISTER on August 19, 1998.

CCRs will provide an opportunity for water system operators to communicate important information about the drinking water and system to consumers. The reports will not only help consumers to make informed choices that affect the health of themselves and their families, they will encourage consumers to consider the challenges of delivering safe drinking water. Educated consumers will be more likely to help you protect drinking water sources and be more understanding of the occasional need to upgrade the treatment facilities that make their water safe.

Many systems already distribute CCRs voluntarily. Those systems know that it is useful to create a positive relationship with their customers. A little goodwill goes a long way.

I. What is a consumer confidence report? Why are drinking water systems required to prepare them?

In 1996, the U.S. Congress amended the Safe Drinking Water Act (SDWA). One of the provisions that Congress added to the law was a requirement that all community water systems provide to their customers a brief annual water quality report. Congress specified certain content for the reports, and required water systems to distribute these reports to all of their customers. CCRs summarize information that water systems already collect to comply with other regulations. **You will not need to engage in any new monitoring just for the CCR.**

Your report will contain basic information on the source(s) of your water, the levels of any contaminants detected in finished water, compliance with other drinking water rules, and brief educational material about why there are contaminants in water and how immuno-compromised people can lower their risk of infection from microbial contaminants. EPA is expecting that most reports will fit on one piece of paper, however based on the number of mandatory items it may take more than one piece of paper. When preparing your CCR keep in mind that a report that contains *too much* information, or is full of technical jargon, will discourage consumers from learning the basics about their water.

The guiding principle behind consumer confidence reports is that all people have the right to know what is in their drinking water and where it comes from. CCRs are not the only part of the revised SDWA that encourage water systems to educate and involve the public. SDWA requires EPA to revise its public notification requirements to speed up notification of violations that present serious health risks, and simplify notification of other violations. SDWA also requires systems and states to involve citizens in deliberations regarding use of the drinking water state revolving fund and in planning for source water assessments. Consumers who are familiar with the basic drinking water information in CCRs will be able to participate more effectively in these processes.

II. Who must prepare a consumer confidence report?

In Kansas every community water system that serves at least 25 residents year round or that has at least 10 service connections must prepare and distribute a consumer confidence report. A water wholesaler that sells water to another water system must provide the retailer with monitoring data and other information that will enable the retailer to produce a CCR, unless the two systems make a different contractual agreement. **Wholesalers are not responsible for creating the report for the retailer, nor are they responsible for providing data on contaminants that the retailer monitors (such as lead or trihalomethanes). Regardless of who produces the report, the retail system is responsible for ensuring that its customers receive a report containing all required content.**

In some cases, a retailer will contract with the wholesaler to produce the report. There are several options in this relationship. If the retailer had no new data to add, it could simply send out the wholesaler's CCR with a cover letter explaining their relationship. If the retailer did need to add data, it might choose to reprint the wholesaler's CCR with a new title/letterhead and extra data. Either of these is acceptable.

What resources are available to help operators produce their reports?

- # The Kansas Department of Health and Environment will be providing monitoring and compliance data and helping systems to create useful CCRs.
- # The EPA is preparing a computerized "fill-in-the-blank" template that systems may use to create a simple but effective CCR.
- # The Safe Drinking Water Hotline (800-426-4791) is a resource for health- related questions and water quality issues.
- # The American Water Works Association (AWWA), Association of Metropolitan Waterworks Associations (AMWA), and the National Rural Water Association (NRWA) and their local associations are encouraging their members to make the CCR part of an overall communications strategy, and are providing various resources to help systems achieve that goal.

III. When must a water system distribute its consumer confidence report?

The reports are based on calendar year data. The first report will include data from 1998, and must be delivered to consumers by 19 October 1999. Reports in years thereafter will be due by July 1.

Wholesalers must deliver information to their buyers by April 1999 (unless there is a separate agreement), and annually thereafter. A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation, and annually thereafter.

IV. What must a water system include in its consumer confidence report?

basic Consumer Confidence Report requirements (<i>please read on for details and recommended enhancements</i>)	
water system information	
#	name/phone number of contact person
#	information on public participation opportunities
#	information for non-English speaking populations, if applicable
sources of water	
#	type, name, and location of water sources
#	availability of source water assessment
#	information on significant sources of contamination, if available
definitions: MCL, MCLG, others as needed	
detected contaminants	
#	table summarizing data on detected regulated & unregulated contaminants
#	known or likely source of each detected contaminant
#	[for MCL violations] health effects language and explanation
#	information on <i>Cryptosporidium</i> , radon, and other contaminants, if applicable
compliance with other drinking water regulations	
#	explanation of violations, potential health effects, and steps taken to correct the violations
#	explanation of variance/exemption, if applicable
required educational information	
#	explanation of contaminants and their presence in drinking water
#	warning for vulnerable populations about <i>Cryptosporidium</i>
#	informational statements on arsenic, nitrate, and lead, if necessary

EPA's regulations set a baseline for the reports. The Agency encourages all systems to enhance or adjust the content of their reports to suit local conditions. If you think that an added picture or graph would help your customers to understand the information that you're providing, by all means, add it. If your customers would benefit from an explanation for why you do additional monitoring or have added new treatment facilities, tell them. As long as any additional information is consistent with, and not detracting from, the purpose of the report, you may add it.

Most customers are interested in a clear statement of whether or not their drinking water meets all the relevant standards. Although it is not mandated by the CCR regulations, something you can do for your customers is to include a few sentences at the beginning of the report explaining the steps you take to protect their drinking water and telling them whether they should feel confident drinking the water that you provide.

An example of this comes from a report that Denver Water sent to its customers in 1998:

“Water Quality Exceeds Mark--Denver Water vigilantly safeguards its mountain water supplies and once again we are able to report that the department has never had a violation of a contaminant level or of any other water quality standard. This brochure is a summary of the quality of water provided to customers last year. It is a record reflecting the hard work by our 1,000 employees to bring you water that is absolutely safe. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Denver Water is committed to providing you with information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.”

EPA requires the following information in every consumer confidence report:

Item 1: Basic information about the water system.

Identify the name of your system, and include the following information about it:

- C The name and telephone number of a person at the water system who can provide additional information and answer questions about the report.
- C A listing of known opportunities for public participation in decision making processes that affect drinking water quality (for example, time and place of regularly-scheduled board meetings). If you do not have regularly-scheduled meetings, you may want to tell customers how they can get information when meetings are announced.

Item 2: Source(s) of water.

You must report the type of water (ground water, surface water, or a combination of the two) and the commonly-used names (if such a name exists) and locations of water source(s). You are encouraged to provide simple maps to help customers understand the source of their water.

Explaining your various interconnections and back-up sources may be difficult, but it is important that consumers understand that the source of their water may vary during the year. Remember to include in your table of detected contaminants monitoring data for these “extra” sources if you use water from them. If your situation is complex, you may need to work with someone from your state drinking water program to decide what information belongs in your report.

Once a source water assessment has been completed, you must notify consumers of the availability of the assessment and tell them where to find a copy. When you have your source water assessment, you need to include in the report a brief summary of your source water’s susceptibility to contamination based on the findings of the source water assessment. KDHE will provide this information to you after the assessment is completed. Take advantage of this opportunity to educate your customers about the impacts that they have on the quality of their water. You may want to provide pollution prevention tips or information on local watershed cleanup activities.

Item 3: Definitions.

The CCR must include definitions of key regulatory terms that consumers will need to understand the contaminant data. The definitions in the reports must be those listed below.

- C **Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- C **Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

The following definitions need to be included only if your report contains information on a contaminant that is regulated by an Action Level (like Lead and Copper) or Treatment Technique (like Surface Water Treatment and Lead and Copper).

- C **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- C **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

The following definition for variances and exemptions must be **included only** if a water system operates under a variance or exemption. **Since there are currently no systems in Kansas that are operating under variances or exemptions you will not need to include this definition.**

- C **Variances and Exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Item 4: Levels of detected contaminants.

An important part of the report is the table that shows the highest level of each detected contaminant (the highest number you reported to the state to determine compliance) and the range of levels of that contaminant you found during the year, if you took more than one sample. The table will also provide for each detected contaminant: the associated Maximum Contaminant Level (MCL) and Maximum Contaminant Level Goal (MCLG), and the likely or known source of that contaminant in drinking water.

A detected contaminant is any contaminant detected at or above the Kansas Reporting Level. (Non-detects are usually shown on lab reports as < (less than) the reporting level; detected contaminants are those that do not have a “less than” sign in front of the reported number (See Appendix B). If you are unsure of the MDL for a contaminant, and your lab reports a value greater than zero, include that in the report. Do not include in the table contaminants that are not detected or are detected below the MDL. If you sometimes distribute water from emergency or back-up sources, you generally need to include monitoring results from these sources in the ranges of detections that you report in the table, unless the source’s contribution is insignificant (e.g., one day per year).

The main table must contain only data for regulated contaminants (contaminants subject to a MCL, TT, or AL), and unregulated contaminants for which monitoring is required by EPA or the state under 40 CFR 141.40 or the Information Collection Rule (ICR). See below for special instructions about *Cryptosporidium* and radon. Only the results of ICR finished water monitoring should be included in the table.

You may make several tables to separate regulated contaminants from those that do not have MCLs, such as ICR contaminants. You may want to organize your table(s) by contaminant type (e.g., microbial, inorganic) or sampling site (e.g., treatment plant, distribution system). Report additional, voluntarily-collected monitoring data in another section of the CCR, separated from the regulated contaminant data. If you want to list all the contaminants which you monitored but did not detect, you must do so outside of the table of detected contaminants. Reporting of secondary MCLs must be done outside the main table. Any additional monitoring data should be reported in another area of the CCR, clearly separated from the regulated contaminant data.

To ensure that consumers can properly compare detected contaminant levels with their MCLs, the table must display the MCL in units that express it as a number greater than 1.0. The MCLG and level of the detected contaminant must be reported in those same units. For example, atrazine is traditionally reported in mg/l. The MCL for atrazine is 0.003 mg/l. If your system detected atrazine at 0.0003 mg/l, it would be more difficult for consumers to understand at a glance that your water is 10 times below the MCL than if you were to report the MCL as 3 ppb and the detected level as 0.3 ppb. Appendix A shows the conversion factor for each contaminant.

You should generally report data from monitoring completed during the past calendar year. When you are on monitoring schedules that are less than once per year, include in the table contaminant data collected in the most recent testing period. If you monitor once every three years for a contaminant and detected that contaminant in the last sample, report the same detection level each of the three years until you take a new sample. **If the report contains detection data that is not from the calendar year indicated, the table must show the date of monitoring and the report must also contain a brief statement explaining that the data presented is from the most recent monitoring done in compliance with regulations.**

EXAMPLE—The state allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data [for inorganic contaminants etc....], though accurate, is more than one year old.

You do not need to report monitoring results that are more than five years old. The results of monitoring done under the Information Collection Rule must be reported only for five years from the date of the last sample or until the detected contaminant becomes regulated and subject to regular monitoring requirements.

The table must contain, for each detected contaminant:

- # the MCL, expressed as a number greater than 1.0 (see Appendix A). If the contaminant is regulated by a TT(treatment technique), put the letters “TT” in place of the MCL. If the contaminant is regulated by an AL(action level), specify the AL applicable to that contaminant.
- # the MCLG for that contaminant expressed in the same units as the MCL (see Appendix A).

- # the level of the contaminant expressed in the same units as the MCL and MCLG:
- # if compliance is determined annually or less frequently (for example, many inorganic and chemical contaminants), include the highest detected level at any sampling point and the range of detected levels, if applicable.
 - # if compliance is determined by a running annual average of all the samples taken from a sampling point (for example, chemical contaminants), include the highest average of any of the sampling points (as reported to the state for compliance purposes) and the range of detections at all sampling points. (See Appendix C)
 - # if compliance is determined by a running annual average of all samples at all sampling points (for example, TTHMs), include the average of all samples and the range of detected levels. (See Appendix C)
 - # for turbidity as a TT for systems that filter and use turbidity as an indicator of filtration performance), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in K.A.R. 28-15-21 for the relevant filtration technology. Explain the reasons for measuring turbidity.

EXAMPLE—Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
 - # for lead and copper, include the 90th percentile value from the most recent monitoring and the number of sampling sites exceeding this value. Do not report parametric data.
 - # for total coliforms (systems that collect fewer than 40 samples per month), include the highest number of positive samples collected in one month.
 - # for total coliforms (systems that collect 40 or more samples per month), include the highest percentage of positive samples collected in one month.
 - # for fecal coliforms and *E. coli*, include the number of positive samples taken that year.
 - # If you detect beta particles in your water at or below 50 pCi/l, you should report the detected level in pCi/l. So that consumers may have a standard against which to compare that detected level, include “50*” in the MCL column (rather than the actual MCL of 4 mrem/year) and include a footnote to the table that says “*EPA considers 50 pCi/l to be the level of concern for beta particles.” If you detect beta particles above 50 pCi/l, you must determine the actual radioactive constituents present in the water to calculate the dose exposure level in mrem/ year, and must report both the detected level and MCL as mrem/year.
- # the likely source of that contaminant, according to the best information that you have. The report need not identify a specific point source, such as “McDonald’s hog farm” or “Monica’s Dry Cleaners”, but may say “farms” or “dry cleaners”. If you are uncertain of the source of a contaminant, include one or more of the typical sources listed in Appendix A that is most applicable to your situation.

for any contaminant detected in violation of a MCL or a TT, or exceeding an AL, clearly highlight in the table the violation or exceedence. This indication could, for example, take the form of a different color type, a larger or heavier font, or a large star. Near by, but not in, the table, include an explanation of the length of the violation/exceedence, the potential adverse health effects (from Appendix A), and actions you took to address the violation/exceedence.

If you've detected unregulated contaminants for which state or federal rules require monitoring (for example, 40 CFR 141.40), except *Cryptosporidium*, include the average of all of the year's monitoring results and the range of detections. We encourage you to include more information on the potential health effects of these contaminants if the results may indicate a health concern. We consider any detection above a proposed MCL or health advisory level to indicate concern. You can call the Safe Drinking Water Hotline (800-426-4791) for this information or find it on EPA's web site at www.epa.gov/safewater/hfacts.html. For these contaminants, EPA recommends that the report contain an explanation of the significance of the results, noting the existence of the health advisory or proposed MCL.

You may wish to explain the reasons for unregulated contaminant monitoring with a statement like the following.

EXAMPLE—Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

If your system distributes water through two physically disconnected distribution systems from different raw water sources, include in the table separate columns for detection data for each service area. Also, describe the area served by each distribution system.

Reporting on contaminants outside of the table:

if the system has performed monitoring that indicates the presence of *Cryptosporidium* either in its source water or its finished water, include in the report:

(1) a summary of the results of the monitoring. You may choose whether or not to report the actual analytical results as a part of this summary.

an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

EXAMPLE—Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes *cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of source water and/or finished water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested for it to cause disease, and it may be spread through other means than drinking water.

if the system has performed monitoring that indicates the presence of radon in its finished water, include in the report:

the results of monitoring (the analytical values reported by the lab)

an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

EXAMPLE—Radon is a radioactive gas that occurs naturally in some ground water. It poses a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon in drinking water is a relatively small part of the total radon in air. Other sources of radon gas are soil and cigarettes. Radon gas that is inhaled has been linked to lung cancer, however, it is not clear what level of radon in your drinking water contributes to this health effect. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, contact the KDHE Radon Section, (785) 296-1593 or call EPA's Radon Hotline (800-SOS-RADON).

if the system has performed other monitoring voluntarily and this monitoring indicates the presence of unregulated contaminants in the finished water, you should report any results that may indicate a health concern. We consider any detection above a proposed MCL or health advisory level to indicate concern. You can call the KDHE Public Water Supply Section, (785) 296-5514 or the Safe Drinking Water Hotline for this information. For these contaminants, EPA recommends the report contain:

(1) the results of monitoring; and

(2) an explanation of the significance of the results, noting the existence of the health advisory or proposed MCL.

Item 5: Information on compliance with other drinking water regulations

If, during the reporting period, the community water system was in violation of one of the following national primary drinking water regulatory requirements, your CCR must describe the violation(s). The description must include a clear and readily understandable explanation of the violation, potential adverse health effects (if any), and the steps the system has taken to correct the violation.

C Monitoring and reporting of compliance data;

(1) If your system failed to take the sample on time, the report should say "health effects unknown". If your system took the samples accurately and on-time, but mailed the results late, you don't need to discuss health effects.

- C Treatment techniques;
- (1) Filtration and disinfection (Surface Water Treatment Rule requirements);
If the violation was a failure to install adequate filtration or disinfection equipment or processes, or there was a failure of that equipment or process, include the following language:
- Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.*
- (2) Lead and copper control requirements;
If the violation was a failure to meet corrosion control, source water treatment or lead service line requirements, you must include the health effects language for lead or copper listed in Appendix A.
- (3) Treatment techniques for Acrylamide and Epichlorohydrin;
If you violate either treatment technique, you must include the relevant health effects language from Appendix A.
- C Record keeping requirements;
- C Special monitoring requirements; or
- C Violation of the terms of a variance, an exemption, or an administrative or judicial order.
- C Systems operating under a variance or exemption;
- (1) If the system is operating under a variance or exemption, its CCR must include a section that explains that the system is operating under a variance or exemption, the date that it was issued, why it was granted, when it is up for renewal, and a status report on what the system is doing to remedy the problem. Also, if public input to the review of the variance or exemption is available, include a notice stating such circumstances.

Item 6: Educational Information.

Every CCR must prominently display the following statements:

- (1) *Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).*
- (2) *Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline(1-800-426-4791).*

Your report must contain basic information about drinking water contaminants. Use the following language, or you may write your own comparable language that better fits your specific local situation:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*
- *Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.*
- *Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.*
- *Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.*
- *Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Special requirements for Nitrate, Lead, Arsenic, and Trihalomethanes

If your water system detected:

- # Nitrate above 5 mg/l (50 % of the MCL), but below the MCL;
- # Arsenic above 25 Fg/l (50 % of the MCL, but below the MCL; and/or
- # Lead above the Action Level in more than 5%, but fewer than 10%, of the homes sampled,
[this doesn't apply if your system samples fewer than 20 sites],

you must include in your report a special educational statement about that contaminant. You may use the language below or write your own, which KDHE must approve.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Arsenic: EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations.

Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

If you believe that the language above is not relevant to your situation, you may adjust the language in consultation with KDHE.

If your system has a running annual average for trihalomethanes above 80 ppb (the new MCL set by the Stage 1 Disinfectant/ Disinfection Byproducts Rule that is not in effect till 2001) but below the current MCL of 100 ppb, you must include the health effects statement for TTHMs contained in Appendix A. You should explain to your customers how you plan to reduce this level.

Other educational information

You are not limited to providing only the required information in your report. The only limitation on this information is that it must not interfere with the educational purpose of the report. You may use the report to explain (or include a diagram of) your treatment processes or source water protection efforts. You may include a statement from the mayor or general manager. Or you could educate your customers about water conservation, taste and odor issues, affiliations with programs such as the Partnership for Safe Water, and so forth. You may want to provide the address for KDHE's drinking water web site (www.kdhe.state.ks.us/water/pwss.html) EPA's drinking water web site (www.epa.gov/safewater/).

V. What should the report look like?

You don't need a fancy computer or a graphic designer to produce a CCR that is easy to read and inviting to your customers. The best way to design your report is to spend some time looking at other reports. See what catches your eye, and copy it. A few things to consider:

- # Write short sentences. Keep your paragraphs short, too.
- # Don't make your text size too small. You might want to squeeze a few extra sentences in your report, but if you add too much, people might ignore the entire report.
- # Give a draft of your CCR to relatives or friends who aren't drinking water experts and ask them if it makes sense. Ask customers for their comments when you publish the report.
- # Don't distract from your main message with graphics and/or pictures that don't complement your message.
- # Be as simple and straight forward as possible. Avoid acronyms, initials, and jargon.
- # Consider printing the report on recycled paper and taking other steps to make the report "environmentally friendly". If you hope to get your customers involved in protecting source water, set a good example for them.

VI. How must a water system distribute its report?

You must mail or deliver a copy of your consumer confidence report to each of your customers, and make a good faith effort to get reports to non-bill-paying consumers. Deliver your first report by October 19, 1999, and your reports in years after that by July 1. You may include the reports with water bills, if feasible, or you may send the reports as separate mailers. **Keep your report on file for five years, and make it available to the public upon request.**

Send a copy to the KDHE Public Water Supply Section, Forbes Field Building 283, Topeka, KS 66620 when you mail it to customers. At the same time, but no more than three months after delivering the report to your customers, submit a certification (see Appendix D) to the KDHE that you distributed the report, and that its information is correct and consistent with the compliance monitoring data previously submitted to the state. Send a copy to any other state agency that the KDHE Public Water Supply Section director identifies. We also encourage you to send copies to local health departments, as well as local TV and radio stations and newspapers. **Systems that serve 100,000 or more people must post their reports on the Internet.**

It is in your system's interest to spread the word about the quality of its water. Since many consumers of your water may not receive bills (people such as apartment renters), you must make serious and "good faith" efforts to reach non-bill paying consumers. A "good faith" effort means selecting the most appropriate method(s) to reach those consumers from the following menu of options KDHE recommends. Those options include but are not limited to:

- # posting the report on the Internet
- # mailing the report to all postal patrons
- # advertising the availability of the report in newspapers, TV, and radio
- # publishing the report in a local newspaper
- # posting the report in public places such as cafeterias of public buildings, libraries, churches, schools, and nursing homes
- # delivering multiple reports for distribution by single-biller customers such as apartment buildings, retirement housing complexes or large private employers
- # delivering the report to community organizations

The Governor can waive the mailing requirement for water systems with populations less than 10,000 people. A decision on this option for Kansas water systems will be made after soliciting input from a, yet to be formed, advisory group. Even if the waiver is adopted in Kansas you may choose to mail the report. If the waiver is available for your system and you decide to take advantage of it, take the following steps:

- C Publish the report in one or more local newspapers [optional for systems with populations less than 500]
- C Inform customers, either by notification in newspapers or by other means approved by the KDHE, that reports will not be mailed
- C Make the reports available upon request

Systems that serve 100,000 or more people must post their reports on the Internet. EPA encourages other systems to post their reports as well. Many local governments have sites where you could post your report, even if your system itself does not have a site. EPA will make links from its website (www.epa.gov/safewater/) to all the reports of which it is aware.

For systems that have a large proportion of *non-English speaking customers*, the EPA requires the inclusion of information in the appropriate language expressing the importance of the report or to offer additional information in the specific language.

EXAMPLE—This report contains very important information about your drinking water. Translate it, or speak with someone who understands it.

-Spanish--Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

-French--Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

APPENDIX A– REGULATED CONTAMINANTS

Key

AL=Action Level

MCL=Maximum Contaminant Level

MCLG=Maximum Contaminant Level Goal

MFL=million fibers per liter

mrem/year=millirems per year (a measure of

radiation absorbed by the body)

NTU=Nephelometric Turbidity Units

pCi/l=picocuries per liter (a measure of radioactivity)

ppm=parts per million, or milligrams per liter (mg/l)

ppb=parts per billion, or micrograms per liter (F g/l)

ppt=parts per trillion, or nanograms per liter

ppq=parts per quadrillion, or picograms per liter

TT=Treatment Technique

Contaminant (units)		traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants							
(1)	Total Coliform Bacteria	MCL: presence of coliform bacteria in \$5% of monthly samples			0	Naturally present in the environment	Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially- harmful, bacteria may be present.
(2)	Fecal coliform and <i>E. coli</i>	MCL: a routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive			0	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
(3)	Turbidity	TT	-	TT	n/a	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Radioactive Contaminants							
(4)	Beta/photon emitters (mrem/yr)	4 mrem/yr	-	4	0	Decay of natural and man- made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
(5)	Alpha emitters (pCi/l)	15 pCi/l	-	15	0	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
(6)	Combined radium (pCi/l)	5 pCi/l	-	5	0	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units)		traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Inorganic Contaminants							
(7)	Antimony (ppb)	.006	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood glucose levels.
(8)	Arsenic (ppb)	.05	1000	50	n/a	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
(9)	Asbestos (MFL)	7 MFL	-	7	7	Decay of asbestos cement water mains; Erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
(10)	Barium (ppm)	2	-	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
(11)	Beryllium (ppb)	.004	1000	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
(12)	Cadmium (ppb)	.005	1000	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
(13)	Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp mills; Erosion of natural deposits	Some people who drink water containing chromium in excess of the MCL over many years could experience allergic dermatitis.
(14)	Copper (ppm)	AL=1.3	-	AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
(15)	Cyanide (ppb)	.2	1000	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

Contaminant (units)		traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
(16)	Fluoride (ppm)	4	-	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.
(17)	Lead (ppb)	AL=.015	1000	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
(18)	Mercury [inorganic] (ppb)	.002	1000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
(19)	Nitrate (ppm)	10	-	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
(20)	Nitrite (ppm)	1	-	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
(21)	Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
(22)	Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Synthetic Organic Contaminants including Pesticides and Herbicides							
(23)	2,4-D (ppb)	.07	1000	70	70	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
(24)	2,4,5-TP [Silvex](ppb)	.05	1000	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

Contaminant (units)		traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
(25)	Acrylamide	TT	-	TT	0	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
(25)	Alachlor (ppb)	.002	1000	2	0	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, experience anemia, or may have an increased risk of getting cancer.
(26)	Atrazine (ppb)	.003	1000	3	3	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
(27)	Benzo(a)pyrene [PAH] (nanograms/l)	.0002	1,000,000	200	0	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties or may have an increased risk of getting cancer.
(28)	Carbofuran (ppb)	.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
(29)	Chlordane (ppb)	.002	1000	2	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver, blood, or nervous system, and may have an increased risk of getting cancer.
(30)	Dalapon (ppb)	.2	1000	200	200	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
(31)	Di(2-ethylhexyl) adipate (ppb)	.4	1000	400	400	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
(32)	Di(2-ethylhexyl) phthalate (ppb)	.006	1000	6	0	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
(33)	Dibromochloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
(34)	Dinoseb (ppb)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.

	Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
(35)	Diquat (ppb)	.02	1000	20	20	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
(36)	Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	1,000,000,000	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
(37)	Endothall (ppb)	.1	1000	100	100	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
(38)	Endrin (ppb)	.002	1000	2	2	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems. People exposed to high doses of endrin have had nervous system effects and convulsions.
(39)	Epichlorohydrin	TT	-	TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
(40)	Ethylene dibromide (ppt)	.00005	1,000,000	50	0	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
(41)	Glyphosate (ppb)	.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or adverse reproductive effects.
(42)	Heptachlor (ppt)	.0004	1,000,000	400	0	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
(43)	Heptachlor epoxide (ppt)	.0002	1,000,000	200	0	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
(44)	Hexachlorobenzene (ppb)	.001	1000	1	0	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
(45)	Hexachlorocyclopentadiene (ppb)	.05	1000	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their stomach or kidneys.

Contaminant (units)		traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
(46)	Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver, and may have an increased risk of getting cancer.
(47)	Methoxychlor (ppb)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
(48)	Oxamyl [Vydate] (ppb)	.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
(48)	PCBs [Polychlorinated biphenyls] (ppt)	.0005	1,000,000	500	0	Runoff from landfills; Discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
(49)	Pentachlorophenol (ppb)	.001	1000	1	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
(50)	Picloram (ppb)	.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
(51)	Simazine (ppb)	.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience tremors or have problems with their blood.
(52)	Toxaphene (ppb)	.003	1000	3	0	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their thyroid, kidneys, or liver and may have an increased risk of getting cancer.
Volatile Organic Contaminants							
(53)	Benzene (ppb)	.005	1000	5	0	Discharge from factories; Leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
(54)	Carbon tetrachloride (ppb)	.005	1000	5	0	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
(55)	Chlorobenzene (ppb)	.1	1000	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their kidneys or liver.
(56)	o-Dichlorobenzene (ppb)	.6	1000	600	600	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

Contaminant (units)		traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
(57)	p-Dichlorobenzene (ppb)	.075	1000	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
(58)	1,2-Dichloroethane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
(58)	1,1-Dichloroethylene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
(59)	cis-1,2-Dichloroethylene (ppb)	.07	1000	70	70	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their immune system.
(60)	trans-1,2-Dichloroethylene (ppb)	.1	1000	100	100	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver or immune system..
(61)	Dichloromethane (ppb)	.005	1000	5	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
(62)	1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
(63)	Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
(64)	Styrene (ppb)	.1	1000	100	100	Discharge from rubber and plastic factories; Leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or blood.
(65)	Tetrachloroethylene (ppb)	.005	1000	5	0	Leaching from PVC pipes; Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
(66)	1,2,4-Trichlorobenzene (ppb)	.07	1000	70	70	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
(67)	1,1,1-Trichloroethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

	Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
(68)	1,1,2-Trichloroethane (ppb)	.005	1000	5	3	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
(69)	Trichloroethylene (ppb)	.005	1000	5	0	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
(69)	TTHMs [Total trihalomethanes] (ppb)	.10	1000	100	n/a	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
(70)	Toluene (ppm)	1	-	1	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
(71)	Vinyl Chloride (ppb)	.002	1000	2	0	Leaching from PVC piping; Discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
(72)	Xylenes (ppm)	10	-	10	10	Discharge from petroleum factories; Discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Unregulated contaminants for which EPA requires monitoring in 141.40:

Aldicarb	Butachlor	p-Chlorotoluene	Dieldrin	Propachlor
Aldicarb sulfone	sec-Butylbenzene*	Dibromomethane	Fluorotrichloromethane*	n-Propylbenzene*
Aldicarb sulfoxide	n-Butylbenzene*	Dicamba	Hexachlorobutadiene*	Sulfate
Aldrin	tert-Butylbenzene*	m-Dichlorobenzene	3-Hydroxycarbofuran	1,1,1,2-Tetrachloroethane
Bromobenzene	Carbaryl	Dichlorodifluoromethane*	Isopropylbenzene*	1,1,2,2-Tetrachloroethane
Bromochloromethane*	Chlorodibromomethane	1,1-Dichloroethane	p-Isopropyltoluene*	1,2,3-Trichlorobenzene*
Bromodichloromethane	Chloroethane	2,2-Dichloropropane	Methomyl	1,2,3-Trichloropropane
Bromoform	Chloroform	1,3-Dichloropropane	Metolachlor	1,2,4-Trimethylbenzene*
Bromomethane (methyl bromide)	Chloromethane	1,1-Dichloropropene	Metribuzin	1,3,5-Trimethylbenzene*
	o-Chlorotoluene	1,3-Dichloropropene	Naphthalene*	

[*regulations do not require monitoring for these contaminants in all states]

ICR microbial contaminants that suppliers must report in the CCR contaminant table (if found in finished water) are: total coliforms, fecal coliforms or *Escherichia coli*, *Giardia*, and total culturable viruses. Report *cryptosporidium*, whether found through ICR monitoring or any other monitoring of raw or finished water, outside of the table according to the guidelines in 141.153(e)(1).

ICR disinfection by-products that suppliers must report in the CCR (if found in finished water) are:

for all treatment plants participating in the ICR monitoring:

- THM4: report trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group
- HAA6: report haloacetic acids (mono-, di-, and trichloroacetic acid; mono- and di-bromoacetic acid; and bromochloroacetic acid) as a group
- HAN (haloacetilenitriles: dichloro-, trichloro-, bromochloro-, and dibromoacetone nitrile)
- CP (chloropicrin)
- HK (haloketones: 1,1-dichloropropanone and 1,1,1-trichloropropanone)
- CH (chloral hydrate)
- TOX (total organic halides)
- Disinfectant Residual

for treatment plants using:

Chloramines.....	Cyanogen Chloride
Hypochlorite Solutions.....	Chlorate
Ozone.....	Bromate, Aldehydes
Chlorine Dioxide.....	Chlorine Dioxide residual, Chlorite, Chlorate, Bromate, Aldehydes

APPENDIX B—U.S. EPA’S MINIMUM DETECTION LIMITS

Note: these detection limits for your information. They are U.S. EPA’s Minimum Detection Limits, codified at 40 CFR 141.23-141.25. Your state may have different detection limits that take precedence. If you are uncertain about the inclusion of certain data, talk to your primacy agency. Some contaminants, such as lead, copper, and ICR contaminants aren’t listed below. If you can’t find a contaminant listed below and your lab analysis provides a detected value for that contaminants, report it in your CCR. Always provide too much data rather than too little.

Contaminant	Methodology	Detection limit (mg/l)
Inorganic Contaminants [40 CFR 141.23(a)(4)]		
Antimony	Atomic Absorption; Furnace	0.0003
	Atomic Absorption; Platform	0.0008
	ICP-Mass Spectrometry	0.0004
	Hydride-Atomic Absorption	0.001
Asbestos	Transmission Electron Microscopy	0.01 MFL
Barium	Atomic Absorption; furnace technique	0.002
	Atomic Absorption; direct aspiration	0.1
	Inductively Coupled Plasma	0.002 (0.001)
Beryllium	Atomic Absorption; Furnace	0.0002
	Atomic Absorption; Platform	0.00002
	Inductively Coupled Plasma	0.0003
	ICP-Mass Spectrometry	0.0003
Cadmium	Atomic Absorption ; furnace technique	0.0001
	Inductively Coupled Plasma	0.001
Chromium	Atomic Absorption; furnace technique	0.001
	Inductively Coupled Plasma	0.007 (0.001)
Cyanide	Distillation, Spectrophotometric	0.02
	Distillation, Automated, Spectrophotometric	0.005
	Distillation, Selective Electrode	0.05
	Distillation, Amenable, Spectrophotometric	0.02

Volatile Organic Contaminants [40 CFR 141.24(f)(7)]

Mercury	Manual Cold Vapor Technique	0.0002
	Automated Cold Vapor Technique	0.0002
Contaminant	Methodology	Detection limit (mg/l)
Nickel	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0006
	Inductively Coupled Plasma	0.005
	ICP-Mass Spectrometry	0.0005
Nitrate	Manual Cadmium Reduction	0.01
	Automated Hydrazine Reduction	0.01
	Automated Cadmium Reduction	0.05
	Ion Selective Electrode	1
	Ion Chromatography	0.01
Nitrite	Spectrophotometric	0.01
	Automated Cadmium Reduction	0.05
	Manual Cadmium Reduction	0.01
	Ion Chromatography	0.004
Selenium	Atomic Absorption; furnace	0.002
	Atomic Absorption; gaseous hydride	0.002
Thallium	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0007
	ICP-Mass Spectrometry	0.0003

Vinyl chloride	502.2; 524.2	0.0005
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Contaminant	Methodology	Detection limit (mg/l)
Benzene	502.2; 524.2	0.0005
Carbon tetrachloride	502.2; 524.2; 551	0.0005
1,2-Dichloroethane	502.0; 524.2	0.0005
Trichloroethylene	502.2; 524.2; 551	0.0005
para-Dichlorobenzene	502.0; 524.2	0.0005
1,1-Dichloroethylene	502.2; 524.2	0.0005
1,1,1-Trichloroethane	502.2; 524.2	0.0005
cis-1,2-Dichloroethylene	502.2; 524.2	0.0005
1,2-Dichloropropane	502.2; 524.2	0.0005
Ethylbenzene	502.2; 524.2	0.0005
Monochlorobenzene	502.2; 524.2	0.0005
o-Dichlorobenzene	502.2; 524.2	0.0005
Styrene	502.2; 524.2	0.0005
Tetrachloroethylene	502.2; 524.2; 551	0.0005
Toluene	502.2; 524.2	0.0005
trans-1,2-Dichloroethylene	502.2; 524.2	0.0005
Xylenes (total)	502.2; 524.2	0.0005
Dichloromethane	502.2; 524.2	0.0005
1,2,4-Trichlorobenzene	502.2; 524.2	0.0005
1,1,2-Trichloroethane	502.2; 524.2	0.0005
Synthetic Organic Contaminants including Pesticides and Herbicides [40 CFR141.24 (h)(18)]		
Alachlor	505 ⁷ ; 507; 525.2; 508.1	0.0002
Aldicarb	531.1; 6610	0.0005
Aldicarb sulfoxide	531.1; 6610	0.0005
Aldicarb sulfone	531.1; 6610	0.0008
Atrazine	505 ⁷ ; 507; 525.2; 508.1	0.0001
Benzo(a)pyrene	525.2; 550; 550.1	0.00002
Carbofuran	531.1; 6610	0.0009
Chlordane	505; 508; 525.2; 508.1	0.0002
Dalapon	552.1; 515.1	0.001

1,2-Dibromo-3-chloropropane (DBCP)	504.1; 551	0.00002
Di(2-ethylhexyl) adipate	506; 525.2	0.0006
Di(2-ethylhexyl) phthalate	506; 525.2	0.0006
Dinoseb	515.2; 555; 515.1	0.0002
Diquat	549.1	0.0004
2,4-D	515.2; 555; 515.1	0.0001
Endothall	548.1	0.009
Endrin	505; 508; 525.2; 508.1	0.00001
Ethylene dibromide	504.1; 551	0.00001
Glyphosate	547; 6651	0.006
Heptachlor	505; 508; 525.2; 508.1	0.00004
Heptachlor epoxide	505; 508; 525.2; 508.1	0.00002
Hexachlorobenzene	505; 508; 525.2; 508.1	0.0001
Hexachlorocyclopentadiene	505; 525.2; 508; 508.1	0.0001
Lindane	505; 508; 525.2; 508.1	0.00002
Methoxychlor	505; 508; 525.2; 508.1	0.0001
Oxamyl	531.1; 6610	0.002
Picloram	515.2; 555; 515.1	0.0001
Polychlorinated biphenyls (PCBs) ⁸ (as decachlorophenyl)	508A	0.0001
Pentachlorophenol	515.2; 525.2; 555; 515.1	0.00004
Simazine	505 ⁷ ; 507; 525.2; 508.1	0.00007
Toxaphene	505; 508; 525.2	0.001
2,3,7,8-TCDD (Dioxin)	1613	0.000000005
2,4,5-TP (Silvex)	515.2; 555; 515.1	0.0002

Contaminant	Methodology	Detection limit (mg/l)
Radioactive Contaminants [40 CFR141.25]		
Tritium	Liquid Scintillation	1,000 pCi/l
Stontium-90	Radio-chemical	10 pCi/l
Strontium-89	Radio-chemical	2 pCi/l
Iodine-131	Radio-chemical	1 pCi/l
Cesium-134	Radio-chemical; gamma ray spectrometry	10 pCi/l
Gross beta	Evaporation	4 pCi/l
Other radionuclides		1/10 of the applicable limit

APPENDIX C—INTERPRETING MONITORING DATA

' 1 sampling site/1 sampling date:

March 1998—.003

Report in Table: highest detected level=.003. Report no range.

' multiple sampling sites/1 sampling date:

Barium	Feb 1998
well 1	0.60
well 2	0.46
well 3	n/d

Report in Table: highest compliance level= 0.60 AND range: n/d-0.60.

' 1 sampling site/multiple sampling dates:

Atrazine	1 st quarter 1998	2 nd quarter 1998	3 rd quarter 1998	4 th quarter 1998
well 1	0.8	3.8	2.1	0.9

Report in Table: highest compliance level=1.9 AND range: 0.8-3.8

' multiple sampling sites/multiple sampling dates:

total trihalomethanes	2 nd quarter 1997	3 rd quarter 1997	4 th quarter 1997	1 st quarter 1998	2 nd quarter 1998	3 rd quarter 1998	4 th quarter 1998
site #1	-	-	-	45	60	125	70
site #2	-	-	-	40	55	115	60
site #3	-	-	-	45	60	105	70
site #4	-	-	-	50	65	135	80
quarterly average	55	125	65	45	60	120	70
rolling annual average	-	-	-	73	74	73	74

Report in Table: highest compliance level: 74 AND range 40-135.

Notes: -- The last 3 quarters of the 1997 are shown because you need them to compute the rolling annual average. The range would include only detection data from 1998, unless one of the values from the previous year was so extraordinary that consumers would need it to understand the reported annual average.

-- If your rolling annual average exceeds 80 (the revised MCL effective in 2001), your report must include the health effects language for TTHMs, even though your system was not technically in violation yet.

' Lead:

	site 1	site 2	site 3	site 4	site 5	site 6	site 7	site 8	site 9	site 10
July 1998	n/d	n/d	8	12	19	3	n/d	n/d	4	22

Report in Table: 90th percentile=19 AND # of sites above action level (15)=2

- Notes: – If your system takes 20 or more samples and more than 5 % (but less than 10%) of the samples are above the action level, you must include the educational language provided on page 10.
- Parametric data that you collect in association with this rule should not be included in the report.

' Turbidity:

When reporting turbidity as an indicator of filtration performance, systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for that technology. In this situation, you may want to report the data in 2 rows of your table as follows:

	MCL	MCLG	level found	range	sample date	violation	typical source
Turbidity	TT=5 NTU max	0	1	n/a			soil runoff
	TT<0.5 NTU 95% of the time		0.3	n/a			

APPENDIX D—CERTIFICATION FORM (suggested format)

CWS name: _____

PWS I.D. no: _____

The community water system named above hereby confirms that the Consumer Confidence Report has been distributed to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency.

System-specific details on CCR distribution to customers are outlined below: (check all that apply)

_____ CCR was distributed by mail or other direct delivery. Specify other direct delivery methods:

_____ “Good faith” efforts were used to reach non-bill paying consumers. Those efforts included the following methods as recommended by the primacy agency:

_____ posting the CCR on the Internet at _____

_____ mailing the CCR to postal patrons within the service area. (attach zip codes used)

_____ advertising availability of the CCR in news media (attach copy of announcement)

_____ publication of CCR in local newspaper (attach copy)

_____ posting the CCR in public places (attach a list of locations)

_____ delivery of multiple copies to single bill addresses serving several persons such as:
apartments, businesses, and large private employers

_____ delivery to community organizations (attach a list)

_____ Posted CCR on a publicly accessible Internet site for systems serving greater than or equal to 100,000 persons at the address: www._____.

_____ Delivered CCR to other agencies as required by the primacy agency (attach a list)

Certified by: Name _____

Title _____

Phone # _____ Date _____

APPENDIX E—EXAMPLES OF CONSUMER CONFIDENCE REPORTS

EPA is providing the following consumer confidence reports as examples of report content and format. In providing these reports, EPA is not endorsing the views nor judging the accuracy of the information contained in the reports. These examples do not necessarily meet all current federal and state CCR requirements. Be sure to check with your state drinking water program since your state may have different requirements from those under which these reports were created.

Sampletown Water Quality Report - 1999

Last year, we conducted more than 500 tests for over 80 drinking water contaminants. We only detected 7 contaminants, and found only barium at a level higher than the state allows. As we told you in a letter at the time, our water was temporarily unsafe. For more information, see the paragraph on the back marked **Violation**. This brochure is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. For more information about your water, call 867-5309 and ask for Joe Sampson.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Your water comes from three municipal wells sunk about 500 feet into an underground source of water called the Low Plain Aquifer. These wells are located west of town behind the municipal garage. The town owns the land around these wells and restricts any activity that could contaminate them. After the water comes out of the wells, we treat it to remove several contaminants and we also add disinfectant to protect you against microbial contaminants. The state is performing an assessment of our source water that it complete by January 2001. We will report the results to you and tell you how to get a copy of the report when it is available.

Our Water Board meets on the first Tuesday of each month at 7:30 pm in the Town Hall. Please feel free to participate in these meetings.

Drinking water, including bottled water, may

reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before we treat it include:

i Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

i Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

i Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.

i Radioactive contaminants, which are naturally occurring.

i Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

W A T E R Q U A L I T Y D A T A

The table below lists all the drinking water contaminants that we detected during the 1998 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1-December 31, 1998. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Terms & abbreviations used below:

- **Maximum Contaminant Level Goal (MCLG):** the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Action Level (AL):** the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **n/a:** not applicable • **nd:** not detectable at testing limit • **ppb:** parts per billion or micrograms per liter • **ppm:** parts per million or milligrams per liter • **pCi/l:** picocuries per liter (a measure of radiation)

Inorganic Contaminants	MCL	MCLG	Sampletown water	Range of detections	Sample Date	Violation	Typical Source of Contaminant
Barium (ppm)	1*	2	1.1	0.03-1.1		i YESi	discharge of drilling wastes and metal refineries
Fluoride (ppm)	4	4	0.98	nd-0.98			water additive which promotes strong teeth
Nitrate as nitrogen (ppm)	10	10	6	nd-9			runoff from fertilizer use
Organic Chemical Contaminants							
Total Trihalomethanes (TTHMs) (ppb)	100	n/a	73	40-135			by-product of drinking water chlorination
Radionuclides							
Beta/photon emitters (pCi/L)	50 **	0	10	8.9-10	Aug 1996		erosion of natural deposits
Lead	AL	MCLG	Sampletown water	# of sites found above the AL			
Lead (ppb)	15	0	0.205	1 site above AL out of 20 sites sampled		corrosion of household plumbing systems	
Unregulated Contaminants							
Nickel (ppm)	not regulated		2	nd-4		EPA & state regulations require us to monitor this contaminant while EPA reconsiders its MCL	

* EPA's MCL for barium is 2 ppm. However, our state has set a lower MCL to better protect human health.

** The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

About our Barium violation: During March, April and May, the treatment equipment that we use to remove barium from our water failed, so the water contained barium in excess of the legal limit. We sent a notice warning you of this problem when it occurred. At the end of May, we finally repaired the equipment, which is now working. We regret exposing you to any potential risk. You should know that some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure. If you want more information about barium or the violation, please call us (867-5309).

About Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Is our water system meeting other rules that govern our operations? The state and EPA require us to test our water on a regular basis to ensure its safety. In February and May of this year, we took the samples at the required time but failed to submit the results of this monitoring to the state in a timely manner. We are reviewing our procedures to ensure that this paperwork will be submitted in a timely manner in the future.

Key Dates of CCR Rule	
Rule Requirement	Requirement Date
5. Date of Publication	August 19, 1998
2. Effective Date	September 18, 1998
3. CCR Delivery Requirements	
<u>for Existing CWSs</u>	
delivery of first CCR	by October 19, 1999
delivery of first certification	by January 19, 2000
delivery of second CCR	by July 1, 2000
delivery of second certification	by October 1, 2000
delivery of subsequent CCRs	by July 1 annually
delivery of subsequent certifications	by October 1 annually
<u>for New CWSs</u>	
delivery of first CCR	by July 1 after the first full calendar operating year
delivery of first certification	by October 1 after the first full calendar operating year
delivery of subsequent CCRs	by July 1 annually
delivery of subsequent certifications	by October 1 annually
<u>for CWSs that sell to another CWS</u>	
delivery of information for first CCR	by April 19, 1999
delivery of information for subsequent CCRs	by April 1 annually, unless a different date is agreed to by contract

Consumer Confidence Report Writing Assistance

The following organizations are currently offering assistance to help purveyors write a consumer confidence report:

American Water Works Association (AWWA) offers technical assistance, seminars, an electronic template, a workbook, a pre-recorded public service announcement, a video and a pamphlet written specifically for small water systems.

American Water Works Association

6666 W. Quincy Avenue, Denver, CO 80235

Phone: (303) 794-7711 or (800) 366-0107

Fax: (303) 794-7310

<http://www.awwa.org/ccrmain.htm>

<http://www.ccrbuilder.com> (for the electronic CCR builder)

Kansas Rural Water Association (KRWA) offers technical assistance, training, and a template on diskette.

Kansas Rural Water Association

PO Box 226, Sabetha, KS 66538

Phone: (785) 336-3760

Fax: (785) 336-2751

<http://www.krwa.net>

MIDWEST ASSISTANCE PROGRAM (MAP)

<http://www.map-inc.org>

Phillip Fishburn, mapfishburn@ourtownusa.net

P.O. Box 491, Haven KS 67543

Phone: (316) 465-2780

Fax: (316) 465-2781

OR

Michelle Black, mblack@interkan.net

P.O. Box 1105, Manhattan, KS 66505

Phone: (785) 539-4833

Fax: (785) 539-4823